



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/682,098	07/19/2001	Derek Bernhart	3348.2	5280

37403 7590 03/10/2005

ATTENTION: MICHAEL VERGA  
JAGTIANI + GUTTAG  
10363-A DEMOCRACY LANE  
FAIRFAX, VA 22030

EXAMINER

TO, BAOQUOC N

ART UNIT	PAPER NUMBER
----------	--------------

2162

DATE MAILED: 03/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/682,098

Applicant(s)

BERNHART ET AL.

Examiner

Baoquoc N To

Art Unit

2162

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

***DETAILED ACTION***

1. After carefully review the remarks filed on 12/08/2004, the Office withdraws the Finality of the Office Action dated on 04/08/2004. The Office regrets any inconveniences due to the applicants.

Claims 1-44 are pending in this application.

***Response to Arguments***

2. Applicant's arguments with respect to claims 1, 20 and 29 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-19 and 29-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blevins (US. Patent No. 5,594,858) and in view of Jonathan Wingfield, (Essay Explorer and a "Typical" Experiment, Molecular Correction Winter 2000, pages 290-23)

Regarding on claim 1, Blevins teaches a method for managing biological information related to a biological experiment comprising:

(b) receiving a specification of an attribute for at least one of the one or more identifiers (user define attribute functions) (col. 7, lines 29-35);

(c) generating a data template including at least one of the one or more identifiers (data prompts) (col. 10, lines 1-5), wherein the data template is configured to receive a value of each at least one identifier (value for attributes) (col. 17, lines 6-10) which represents the attribute specified for that identifier for the biological experiment (lab) (col. 17, lines 45-50); and

(d) receiving by the data template a value for the at least one identifier in accordance with the attribute specified for the identifier(input value) (col. 17, lines 7-10).

Blevins does not explicitly teach providing one or more identifier related to the use of the probe array used to acquire the biological information. However, Blevins teaches, "the selection portion 224 provides a list of data prompts related to processes associated with the particular project that may be selected by a user to created the unique control template or modify an existing control template" (col. 10, lines 1-5). This teaches data prompts are the identifiers related to the project. On the other hand, Jonathan discloses "table1 with the experimental template comprising row id, plate id... and same as table 2 and 3) page 21. These experimental template comprising data which were analyzing from the sample plates which is the probe array of the claimed invention. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify Blevin's system to include experimental templates including identifier, defined attributes and the results analyzer to analyze the

Art Unit: 2162

samples plates as taught by Jonathan in order to create template to conduct biological experiment.

Regarding on claim 2, Blevins teaches (e) storing the value for the at least one identifier in a data structure (col. 11, lines 20-25).

Regarding on claim 3, Blevins teaches the data structure is included in a database (template library) (col. 7, lines 18-20).

Regarding on claims 4 and 30, Blevins teaches the one or more identifiers comprise experiment identifiers (data prompts) (col. 10, lines 1-5) and the data templates comprise an experiment data template (list preferred or existing template) (col. 12, lines 1-10).

Regarding on claims 5 and 31, Blevins teaches the one or more identifiers comprise sample identifiers (data prompts) (col. 10, lines 1-5) and the data template comprises a sample data template (list preferred template) (col. 12, lines 1-10).

Regarding on claims 6 and 32, Blevins teaches the data structure comprises an experiment information file (col. 17, lines 28-33).

Regarding on claim 7, Blevins teaches displaying, prior to step (d), the data template to a first user (col. 9, line 60).

Regarding on claim 8, Blevins teaches the value is provided by the first user responsive to displaying the data template (col. 17, lines 5-10).

Regarding on claim 9, Blevins teaches the value is provided by the first user in accordance with a first type attribute (col. 17, lines 5-10).

Regarding on claim 10, Blevins teaches the first type attribute is a data attribute, time attribute, integer attribute, floating point, data attribute, character string attribute, required attribute, or controlled attribute (col. 17, lines 43-49).

Regarding on claim 11, Blevins teaches the value is provided by the first user in accordance with a required attribute (col. 17, lines 5-10).

Regarding on claim 12, Blevins teaches the required attribute specifies that the value is either required or not required to be received (col. 17, lines 29-31).

Regarding on claim 13, Blevins teaches the value is provided by the user in accordance with a controlled attribute (col. 17, lines 45-50).

Regarding on claim 14, Blevins teaches the controlled attribute specifies that the value is to be one or more of a plurality of user-specified values specified by a second user (col. 17, lines 45-50).

Regarding on claim 15, Blevins teaches the first and second users are different users (col. 10, lines 40-45).

Regarding on claims 16 and 36, Blevins teaches (f) storing instrument information for at least one instrument in the data structure, wherein the instrument is included in an experiment related to the probe array (col. 17, lines 25-30).

Regarding on claims 17 and 37, Blevins teaches (f) storing image in the data structure, wherein the image data is based, at least in part, on scanning of the probe array (col. 7, lines 25-35).

Regarding on claims 18 and 38, Blevins teaches (g) analyzing the image data to generate results data (col. 17, lines 25-30); and

(h) storing the results data in the data structure (col. 17, lines 35-40).

Regarding on claim 19, Blevins teaches (i) tracking the value, the image data, and the result data (col. 7, lines 18-19).

Regarding on claim 29, Blevins teaches a computer program product, comprising:

(a) a template generator (generator 124) (col. 7, lines 18-20) that generates a data template including one or more identifiers (attributes) (col. 7, lines 10-15) of a biological experiment with probe arrays;

(b) a value receiver (attributes) that receives values for the identifiers in accordance with their attributes (col. 7, lines 41-45); and

(c) a data storage manager that stores values in a data structure (col. 7, lines 41-45);

wherein the values (input values) are based on one or more experiments on one or more probe arrays (col. 7, lines 65-67).

Blevins does not explicitly teach template is created for biological experiment with a probe arrays. On the other hand, Jonathan discloses "table1 with the experimental template comprising row id, plate id... and same as table 2 and 3) page 21. These experimental template comprising data which were analyzing from the sample plates which is the probe array of the claimed invention. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify Blevin's system to include experimental templates including identifier, defined

attributes and the results analyzer to analyze the samples plates as taught by Jonathan in order to create template to conduct biological experiment.

Regarding on claim 34, Blevins teaches a template generator generates the data template in response to a first user specifying at least one attribute of the one or more identifiers (col. 12, lines 1-5).

Regarding on claim 35, Blevins teaches the data template is selected by a second user (col. 10, lines 40-55).

4. Claims 20-28 and 39-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blevins (US. Patent No. 5,594,858).

Regarding on claim 20, Blevins teaches a method for managing biological experiment information generated through the performance of an experiment with probe array, the method comprising the steps of:

(a) receiving from a first user a selection of a first data template (selects the type of control template to be create) having a plurality of identifiers (data prompts) (col. 12, lines 1-5) each identifying an attribute of the biological experiment (col. 11, lines 10-24);

(b) displaying (display screen) the first data template to the first user in response to the selection (col. 12, lines 30-37);

(c) receiving from the first user values (input value) for one more of the identifier (data prompts) (col. 10, lines 1-5) of the first data template in accordance with the attributes identified by the one or more identifiers (col. 7, lines 10-15); and

(d) saving the values in a data structure (col. 17, lines 35-40).

Blevins does not explicitly teach this is a biological experiment with probe array. On the other hand, Jonathan discloses "table1 with the experimental template comprising row id, plate id... and same as table 2 and 3" (page 21-22). These experimental template comprising data which are analyzing from the sample plates which is the probe array of the claimed invention. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify Blevin's system to include experimental templates including identifier, defined attributes and the results analyzer to analyze the samples plates as taught by Jonathan in order to create template to conduct biological experiment.

Regarding on claim 21, Blevins teaches the receiving step comprise the steps of:

(1) displaying a list of names of plurality of data templates (col. 7, lines 60-63);  
and

(2) receiving from the first user, a selection of one of the displayed list of name a name of the first data template (col. 11, lines 60-63).

Regarding on claim 22, Blevins teaches the plurality of data templates include one or more default data templates (list preferred templates) (col. 12, lines 28-33).

Regarding on claim 23, Blevins teaches the list of names is displayed to the first user in a tree structure of a graphical user interface (col. 12, lines 1-4).

Regarding on claim 24, Blevins teaches the data structure includes an experiment information file (col. 12, lines 30-50).

Regarding on claim 25, Blevins teaches the experiment information file is included in a database (col. 12, lines 30-50).

Art Unit: 2162

Regarding on claim 26, Blevins teaches (e) generating the first data template based, at least in part, on a second user specifying the plurality of identifiers (col. 12, lines 30-50).

Regarding on claim 27, Blevins teaches generating the first template based, at least in part, on a second user specifying the attributes of the plurality of identifiers (col. 12, lines 60-62).

Regarding on claim 28, Blevins teaches the first and second users are different users (col. 10, lines 40-55).

Regarding on claim 39, Blevins teaches a computer implemented system for managing information of probe array experiments, comprising:

A computer-readable storage medium (memory) (col. 5, lines 60-67);

A database (library 11) (col. 6, line 1);

A data template generator (template generator 124) coupled to the computer-readable storage medium (col. 7, lines 18-20); and

An experiment manager (control template system) coupled to the computer readable storage medium and the database (col. 7, lines 18-20),

Wherein the data template generator generates at least one user-defined data template (selects the type of control template to be created) and stores (save) the user-defined data template on the computer-readable medium (col. 12, lines 1-5), each user-defined data template defining attributes of a set of experiment identifiers (col. 11, lines 10-15), a data template being selected from the at least one user-defined data template (a list of predefined or existing templates) (col. 12, lines 1-5) by a user using the

Art Unit: 2162

experiment manager, experiment identifiers being input (list of data prompts) (col. 10, lines 1-4) using the experiment manager according to the selected data template, the inputted experiment identifiers being stored in the database as an experiment information file (save) (col. 17, lines 34-36).

Blevins does not explicitly teach the experiment manager and probe array experiment. However, Blevins teaches, "the control template system 120 includes the control template library 123 that communicates with the template generator 124" (col. 7, lines 18-20). Since the claim does not define what is the experiment manager. The examiner equates experiment manager is control template system 124. On the other hand, Jonathan discloses "table1 with the experimental template comprising row id, plate id... and same as table 2 and 3) page 21. These experimental template comprising data which were analyzing from the sample plates which is the probe array of the claimed invention. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify Blevin's system to include experimental templates including identifier, defined attributes and the results analyzer to analyze the samples plates as taught by Essay Explorer in order to create template to conduct biological experiment. This is the probe array experiment. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify Blevin's system to include analyzing the sample plates to retrieve as taught by Jonathan Wingfield in order to conduct the biological experiment.

Regarding on claim 40, Blevins teaches instrument information is included in the experiment information file (col. 17, lines 25-35).

Regarding on claim 41, Blevins teaches a data processor couple to the database, for acquiring experiment data and storing the experiment data as an experiment data file in the database, a data analyzer, connected to the database, for analyzing result files in the database; and

A file manager (the control template library) for tracking the experiment file, the experiment data file, and analyzing results files (col. 7, lines 18-19).

Regarding on claim 42, Blevins teaches the experiment data file is an image file (col. 17, lines 25-35).

Regarding on claim 43, Blevins teach the file manager tracks the experiment information file, the experiment data file, and the analyzed results files according to the files names (col. 12, lines 18-37).

Regarding on claim 44 is rejected same as claim 39, in addition Blevins also teaches a computer-readable storage medium having at least one default data table stored thereon (predefined or existing templates) (col. 12, lines 1-5).

### ***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Baoquoc N. To whose telephone number is at 571-272-4041 or via e-mail BaoquocN.To@uspto.gov. The examiner can normally be reached on Monday-Friday: 8:00 AM – 4:30 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached at 571-272-4107.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:

Art Unit: 2162


Commissioner of Patents and Trademarks  
Washington, D.C. 20231.

The fax numbers for the organization where this application or proceeding is  
assigned are as follow:

(703) 872-9306 [Official Communication]

Baoquoc N. To

March 3rd, 2005

  
JEAN M. CORRIELUS  
PRIMARY EXAMINER